

### Principal Design

Representing X.500 in a RDBMS

- data extensibility and complexity
- object orientated and hierarchical

emp#	name	age	salary
------	------	-----	--------

↓ Relational

type	syntax	value
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↓ X.500

#### PROPERTY

object name	parent name	type	syntax	value
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### Conceptual Design

Implementing X.500 in a RDBMS

- attributes and values
- hierarchy and names
- aliases
- data tolerance

#### HIERARCHY

EID	Parent	Alias	Name
-----	--------	-------	------



Parent	Path
--------	------



Alias	A-EID
-------	-------



Name Norm	Name Raw
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#### OBJECT

EID	AID	VID	Disting	value
-----	-----	-----	---------	-------



Name Norm	Name Raw
-----------	----------

#### ATTRIBUTE

EID	Type	Syntax	Object ID
-----	------	--------	-----------

functional decomposition →

service decomposition →

**FIG. 1a**

## Logical Design

### Performance Enhancements for RDBMS

- indexing option
- I/O considerations
- management

#### DIT

EID	PARENT	ALIAS	RDN
-----	--------	-------	-----

#### TREE

EID	PATH
-----	------

#### ALIAS

EID	A-EID
-----	-------

#### NAME

EID	RAW
-----	-----

#### SEARCH

EID	AID	VID	DISTING	NORM
-----	-----	-----	---------	------

#### ENTRY

EID	AID	VID	RAW
-----	-----	-----	-----

#### SUBSEARCH

EID	AID	VID	CID	DISTING	NORM
-----	-----	-----	-----	---------	------

#### ATTR

EID	SYX	DESC	OBJECTED
-----	-----	------	----------

## Physical Design

### Realizing X.500 in a RDBMS

- efficiency
- portability
- functional extensibility

#### DIT

EID	PARENT	RDNKEY	RDN	FLAGS
-----	--------	--------	-----	-------

#### TREE

EID	LEV1	LEV2	LEV3	LEV4	PATH	FLAGS
-----	------	------	------	------	------	-------

#### ALIAS

EID	A_EID	FLAGS
-----	-------	-------

#### NAME

EID	RAW	FLAGS
-----	-----	-------

#### INFO

MAXIED	FLAGS
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#### SEARCH

EID	AID	VID	NORM KEY	NORM	FLAGS
-----	-----	-----	----------	------	-------

#### SUBSEARCH

EID	AID	VID	CID	CVID	NORM KEY	NORM	FLAGS
-----	-----	-----	-----	------	----------	------	-------

#### ENTRY

EID	AID	VID	RAW	FLAGS
-----	-----	-----	-----	-------

#### SENTRY

EID	AID	VID	VALUE	FLAGS
-----	-----	-----	-------	-------

#### BLOB

EID	AID	VID	VFRAG	RAW	FLAGS
-----	-----	-----	-------	-----	-------

#### ATTR

AID	SYX	DESC	OBJECT ID	FLAGS
-----	-----	------	-----------	-------

#### SUBATTR

CID	SYX	DESC	OBJECT ID	FLAGS
-----	-----	------	-----------	-------

#### OCLASS

OCID	DESC	OBJE CTID	MUST LIST	MAY LIST	SUPER LIST	FLAGS
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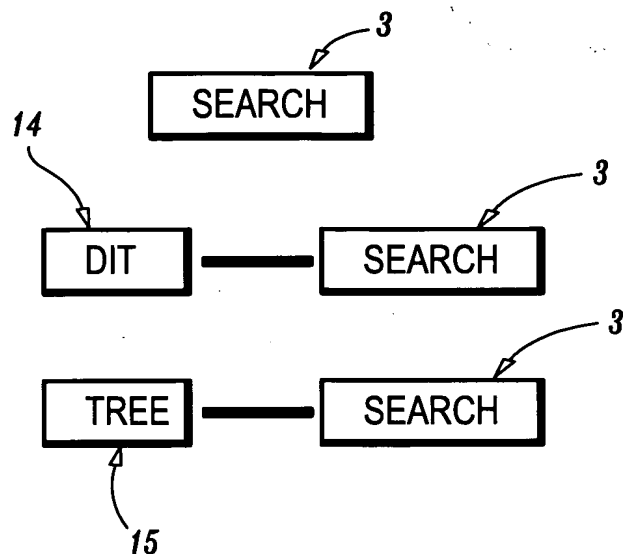
physical decomposition →

**FIG. 1b**

BASE OBJECT  
WHOLE TREE 11

ONE LEVEL 12

SUB TREE 13

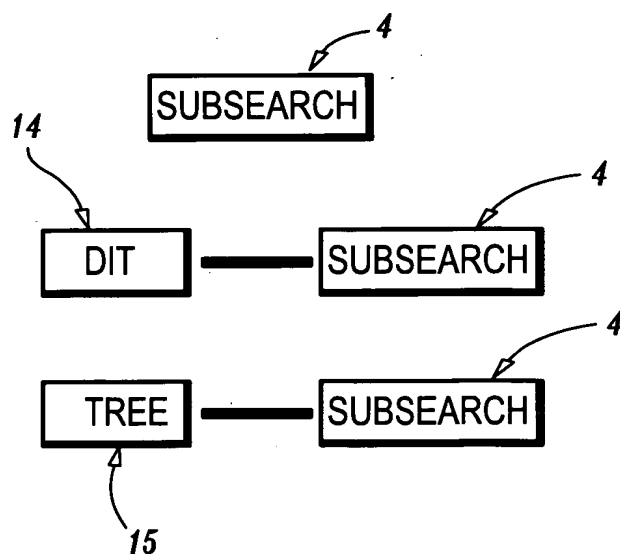


**FIG. 2**

BASE OBJECT  
WHOLE TREE 11

ONE LEVEL 12

SUB TREE 13



**FIG. 3**

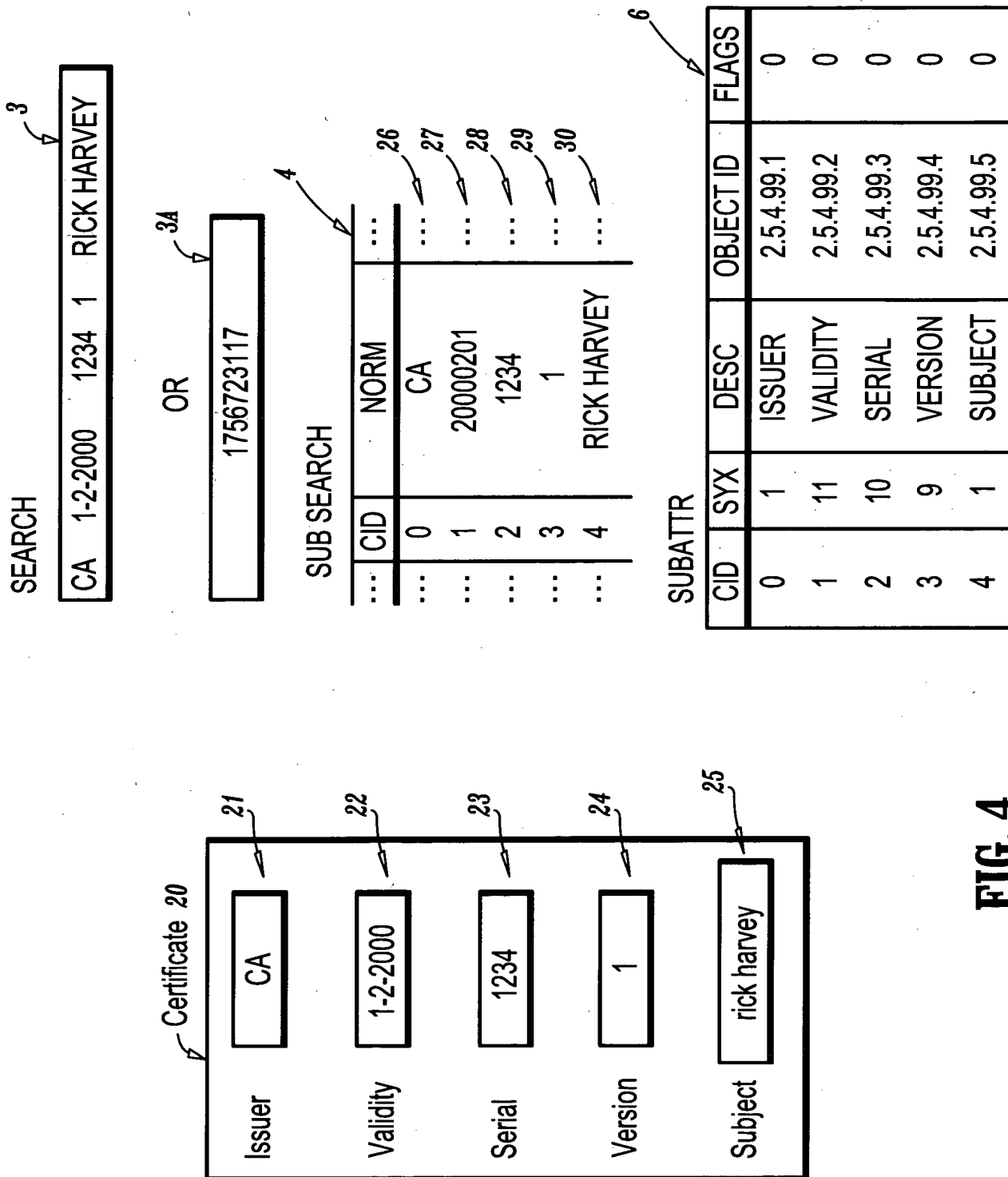
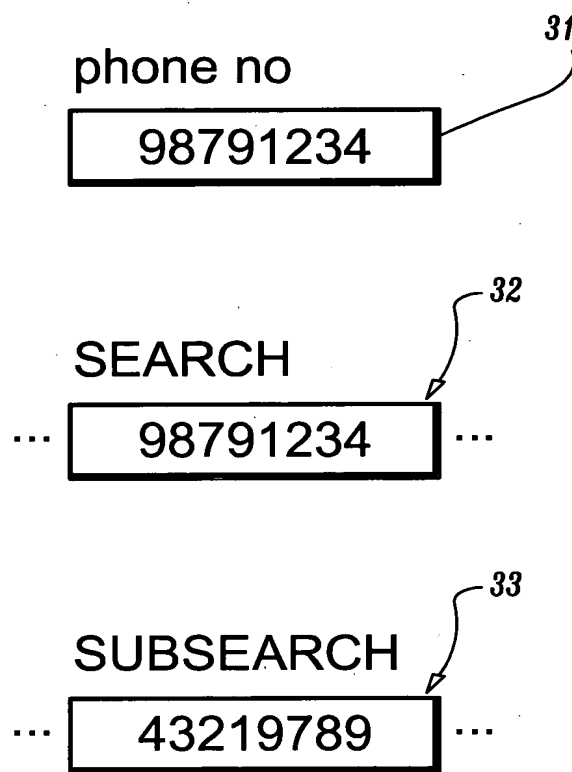


FIG. 4

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**FIG. 5**